

1999 WEATHER SUMMARY

JANUARY temperatures averaged 0.8 degrees warmer than normal. Precipitation averaged 4.36 inches, 169% of normal.

FEBRUARY was New York's seventh consecutive warmer-than-normal month. The month averaged 5.5 degrees warmer than normal. February was also a very dry month. The state averaged only 1.29 inches of precipitation (*rain and melted snow*) for the month, which represented 53% of the February normal. This was the 5th driest February on record. Snowfall was below normal nearly everywhere in the state.

MARCH broke New York's string of seven consecutive warmer-than-normal months. The state averaged 1.6 degrees cooler than normal. March was wetter than normal across most of the state. The state received 135% of the March normal.

APRIL temperatures were 1 degree warmer than normal. Precipitation was lacking across most of the state. Only the far western reaches of the state reported a monthly excess. It was the state's 6th driest April in 105 years of record and the driest since 1941.

MAY was a warm and dry month. The average precipitation amount was 2.59 inches, which represented 72% of normal. The average temperature was 3 degrees warmer than normal, the warmest May since 1991.

JUNE was hot and dry. Most places saw the mercury hit the 90 degree mark on as many as 8 days during the course of the month. The average temperature was 3.7 degrees warmer than normal. This made it the 7th hottest June in 105 years. All sections of the state reported June to be a very dry month. The state overall averaged just 57% of the normal June precipitation allotment for the 12th driest June on record. The lack of precipitation, along with the warm temperatures, resulted in an intensification of drought conditions in the Empire State. Most places were classified by the Palmer Drought Severity Index as experiencing moderate to severe drought by the end of the month.

JULY was the 5th warmest July in 105 years of record. It was the warmest July since 1955. Rainfall totals ranged from less than an inch to well over six inches. The average amount for the state was 3.21 inches or 90% of normal. The Coastal Division was very dry, averaging only 33% of normal. Areas from the Mohawk Valley north were generally wetter than normal. The St. Lawrence Valley averaged 5.35 inches (*155% of normal*).

AUGUST continued dry. Average precipitation amount was 2.92 inches or 75% of normal. This summer (*June-August*) there was only an average of 8.33 inches of rainfall in New York (*74% of normal*). This makes it the 9th driest summer on record and the driest since 1953. Temperatures averaged just 0.1 degrees cooler than normal.

SEPTEMBER 1999 was the second wettest September on record, thanks in large part to Hurricane Floyd. Precipitation averaged 6.96 inches, which is nearly double (*185%*) the monthly normal. September was also quite warm with all weather stations reporting monthly averages that were warmer than normal. The state averaged 3.6 degrees warmer than normal. This was the 7th warmest September on record.

OCTOBER precipitation total was 3 inches which represents 91% of the normal monthly amount. Northern portions of the state were wetter than normal. Temperatures were cooler than normal despite a couple of very warm days at the end of the month. Temperatures overall averaged 1 degree cooler than the October normal.

NOVEMBER temperatures were unseasonable warm. Average temperature for the state was 4.8 degrees warmer than normal. This was warm enough to make it the warmest November since 1975 and the 4th warmest since comparable records began in 1895. Precipitation averaged 3.08 inches, which was 82% of normal.

DECEMBER temperatures averaged 3.5 degrees above normal. Precipitation totaled 2.03 inches, only 61% of normal.

THE TOP 9 OF 1999

The Most Significant Weather Events of the Year in the Northeastern United States

From hurricanes to droughts and snow storms to heat waves, there were several noteworthy weather events that transpired in the northeastern United States during 1999. Climatologists at the Northeast Regional Climate Center at Cornell University identified nine weather events that will be remembered for the significant impacts they had on the region.

1) The Drought (Summer)

Perhaps the most costly weather event of 1999 was not a devastating storm, but the drought that climaxed during the summer months. The dry conditions that prevailed during the second half of 1998 were the prelude to this year's drought. Between the months of July and December 1998 the Northeast received only 71% of the normal precipitation, for their 3rd driest such period on record. After a wet January, the months of February through August 1999 followed a similar pattern, accumulating only 76% of the normal precipitation for, again, the 3rd driest such period in 105 years of record. Precipitation deficits for the fourteen months ending in August 1999 ranged from 6 to over 14 inches across the region.

Severe drought (according to the Palmer Drought Severity Index) was reported in eastern Maryland in May and spread into parts of West Virginia during June. Drought conditions in these states intensified to "extreme" (the worst drought category) by July and continued into September. By mid-July, severe drought was reported in parts of every state in the Northeast Region. Extreme drought was noted in parts of Delaware, Pennsylvania, New Jersey and New York between late July and early September. Drought emergencies with mandatory water restrictions were declared in Maryland, Delaware, New Jersey and Pennsylvania. Counties in nine states (Connecticut, Kentucky, Maryland, New Jersey, New York, Ohio, Pennsylvania, Virginia and West Virginia) were declared agricultural drought disaster areas. Monetary losses to farmers in West Virginia alone exceeded \$80 million. Abundant rainfall during September (twice normal and the wettest on record) brought an end to drought concerns.

2) Hurricane Floyd (September 15-18)

Hurricane Floyd was a record-breaker and a drought-breaker in the Northeast. The hurricane made landfall in North Carolina during the early morning hours of September 16th. Tropical Storm Floyd moved up the eastern seaboard on the 16th and during the early hours of the 17th. The storm brought both high winds and exceptionally heavy rainfall resulting in flooding up and down the northeast coast. Rainfall associated with the storm (September 15-18) totalled over 8 inches in a corridor running from western Connecticut through the lower Hudson Valley and northern

New Jersey, and into northern Delaware. Some places within this area recorded over 12 inches of rain. Philadelphia, PA with 6.63 inches, and Albany, NY with 6.05 inches, were among the locations that set all-time 24-hour precipitation records. The storm was also a major contributor to the all-time wettest month on record in Philadelphia with 13.07 inches.

Ten states were declared major disaster areas as a result of Floyd, including Connecticut, Delaware, Maryland, New Jersey, New York and Pennsylvania in the Northeast, and Florida, North Carolina, South Carolina and Virginia to the south. Total damage estimates exceed \$6 billion (not just the Northeast). A total of 75 people lost their lives in the storm, including 21 in the northeast states. Over 1.5 million northeast electric customers lost their power at some point during the storm.

3) July Heat Wave (July 4-6)

An oppressive heat wave hit the Northeast over the Independence Day weekend as the Bermuda High established itself off the Mid-Atlantic Coast and pumped hot, humid air across the region. The heat wave, which peaked between July 4th and 6th pushed temperatures above 90 degrees F over all but the northern portions of the region and temps hit triple-digits from Long Island through Maryland. Over 150 heat-related deaths were reported around the region and hundreds more people were hospitalized as the heat index climbed to around 115 degrees in some locations. Energy demand was enormous, in many cases exceeding available resources. Several utilities reported all-time peak electric consumption during this period and some were forced to implement "rolling blackouts". Thousands of chickens succumbed to the heat and some areas reported fish dying as the temperatures of streams reached unprecedented levels. Some roads were closed when the intense heat caused the pavement to buckle.

Dozens of daily record temperatures were broken, including 103 degrees in Newark, NJ on the 5th. Islip (Long Island), NY, reported their all-time record high temperature of 102 degrees on the 5th. New York City reported highs of 101 degrees on the 5th and 6th, marking only the 49th and 50th triple-digit temperatures in its 130 years of weather record-keeping. Harrisburg, PA, Atlantic City, NJ and New York City reported their warmest Julys on record. It was the 7th warmest July on record for the twelve-state northeast region.

4) Western New York Snow Storm (March 3-4)

Deep low pressure moved north from West Virginia across New York to Quebec between March 3rd and March 4th. Heavy snow fell at the rate of up to two to three inches per

hour in places. Across Monroe and Wayne Counties in New York, snowfall amounts were the greatest with over two feet reported. Some higher-elevation locations in Maryland, West Virginia and western Pennsylvania reported 12 to 16 inches of snow. High winds associated with the storm resulted in blizzard or near-blizzard conditions and drifts reached four to five feet in places. A portion of the New York State Thruway was closed, stranding several hundred cars. Six western New York counties were declared Federal Disaster Areas and several were declared State Disaster Areas. The National Guard was called in to help remove cars, rescue stranded motorists and deliver food and medical supplies.

Two days later (March 6), Rochester, NY received another 18.4 inches of snow, bringing the three-day total to 40.7 inches. This established several new snowfall records for that city, including a record snow depth of 36 inches.

5) Late-Season Coastal Snowstorm (March 14-15)

A low pressure system developed along the Gulf Coast on the morning of the 13th. During the morning of the 14th, it moved into Alabama and was located just east of the Delmarva Peninsula around daybreak of the 15th. The storm intensified and moved rapidly offshore on the 15th and reached Nova Scotia the morning of the 16th. Some areas reported snowfall rates of 1-2 inches per hour at the height of the storm. The heavy snow caused many travel problems throughout the region. The heavy, wet snow also took down trees and power lines in several areas. In eastern Pennsylvania, about 189,000 customers lost power, which ranked as one of the regional utility's ten worst outages on record.

The rain/snow line moved back and forth across southern New Jersey, Delaware and eastern Maryland, limiting snowfall totals to anywhere from less than 2 to over 5 inches. In West Virginia and the Maryland panhandle, snow totals ranged between 5 and 15 inches. Six to twelve inches was reported across much of Pennsylvania, northern New Jersey, eastern New York and southern New England. Northern Maine had 4 to 8 inches, while the southern portion of that state reported 12 to 17 inches. Northwestern Pennsylvania, western, central and northern New York and Vermont avoided this storm, with little or no snow reported.

6) Mixed Bag of Precipitation (January 13-15)

An extremely cold arctic air mass moved slowly across the Northeast on January 13 and January 14. A low pressure system developed on the 13th over the Tennessee Valley, and moved into the Mid Atlantic region and finally up New York's Hudson River over the next few days, spreading precipitation region wide from early on the 13th through midday on the 15th. The precipitation began as snow in most places, but as warmer air was pulled into the storm later in the period, many places saw the snow change to freezing rain. Total liquid equivalent was on the order of 2 inches across much of the region.

Ice accumulations from one quarter to nearly one inch occurred across much of Delaware, West Virginia, Maryland and the District of Columbia. The ice this storm left behind had a large impact on the region. Hundreds of car accidents, slip and fall injuries, downed trees, and power outages were reported.

New Jersey, southeastern New York and southern New

England averaged around 2 inches of snow. Elsewhere, the precipitation remained in the form of snow through most of the storm, resulting in more significant accumulations. Six to ten inch snowfall totals were quite common across western Pennsylvania, New York, Massachusetts and Vermont. Two to six inches was reported across New Hampshire and Maine. Northeast winds off the warmer waters of the Atlantic Ocean produced "ocean effect" snow squalls along the eastern coast of Massachusetts. Total snowfall in this area ranged from 10 to 16 inches.

7) Flooding (August 25-26)

A line of thunderstorms affected southern portions of the region on the evening of August 25th. Washington, DC received over 2 inches of rain and some places in Maryland reported 2 to 6 inches of rain. Several creeks and small streams were out of their banks and roads in low lying areas were covered by water.

Another round of strong thunderstorms on the 26th produced torrential rain that caused serious urban and small stream flash flooding over a much larger portion of the region. Four inches of rain fell in Annapolis, MD in only 90 minutes. Rainfall amounts 3 to 7 inches were not uncommon along coastal areas. In New York City, over 3 inches of rain fell and subway service was severely disrupted as 3 to 5 feet of water collected at subway station locations. Most of the reports of serious flooding were received from Rhode Island, Connecticut, eastern Pennsylvania, New Jersey, Maryland and Delaware. The storms and associated flooding also resulted in numerous power outages and the closure of many roads around the area.

8) Hurricane Dennis (September 4-7)

After meandering off the North Carolina coast for nearly a week, the remnants of Hurricane Dennis affected the Northeast on September 4th through 7th. Its legacy included heavy rain and power outages from fallen tree limbs, both of which were mainly confined to the southern portion of the region. Tidal flooding occurred along the western shoreline of the Chesapeake Bay, with tides were 2 to 3 feet above normal at some locations. Up to 5 inches of rain fell over portions of Maryland and eastern West Virginia. Sugar Grove, WV reported over 7 inches of rain from the storm and Williamsport, PA measured 6.29 inches on the 7th-their second greatest 24-hour amount on record. Some other portions of central Pennsylvania received 3 to 5 inches of rain. Most of the rest of the Northeast averaged 1 to 2 inches, with around an inch or less in New England.

9) Lake-Effect Snow (January 1-15)

The western and northern New York lake-effect snow belts were repeatedly pounded by lake-effect storms during the first half of January 1999. Record or near-record snowfall accumulations of 4 to 6 feet were recorded across this area. Buffalo, NY reported over 60 inches of snow between January 1 and 15. Numerous structural failures and roof collapses were noted around the area. The western New York counties of Chautauqua, Cattaraugus, Erie, Niagara, Orleans, Genesee and Wyoming, as well as the northern New York counties of St. Lawrence, Lewis and Jefferson were declared Federal Disaster Areas.

Figure 3.
AVERAGE DATE OF THE LAST
SPRING 32°F FREEZE

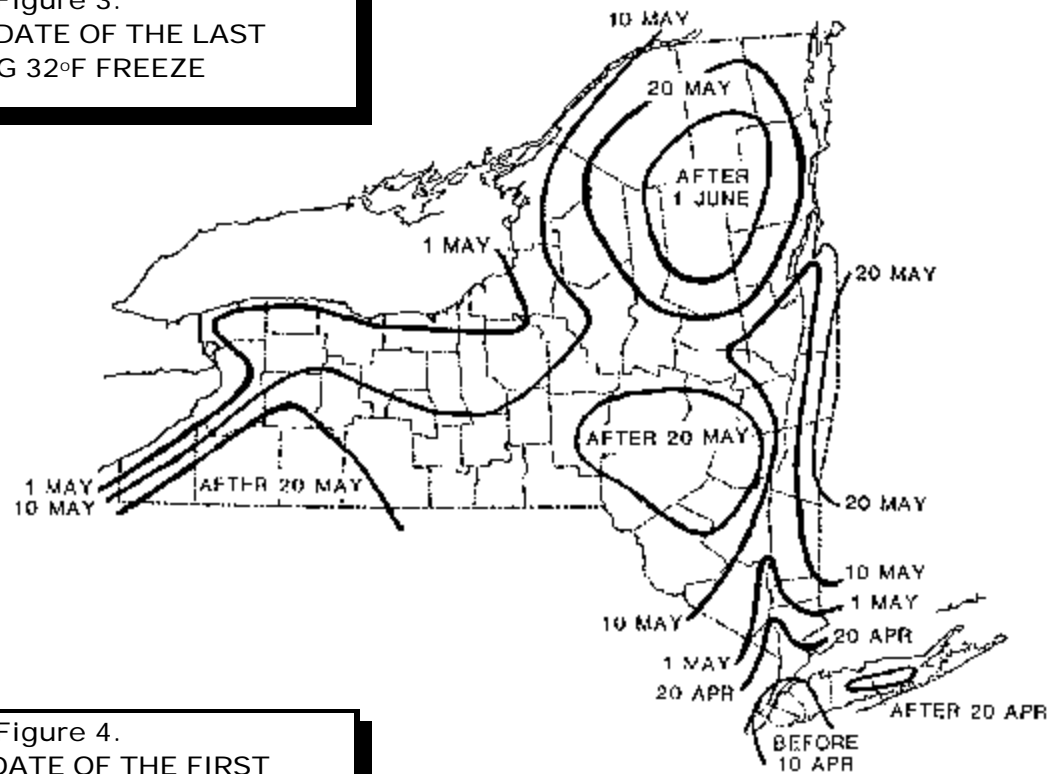


Figure 4.
AVERAGE DATE OF THE FIRST
AUTUMN 32°F FREEZE

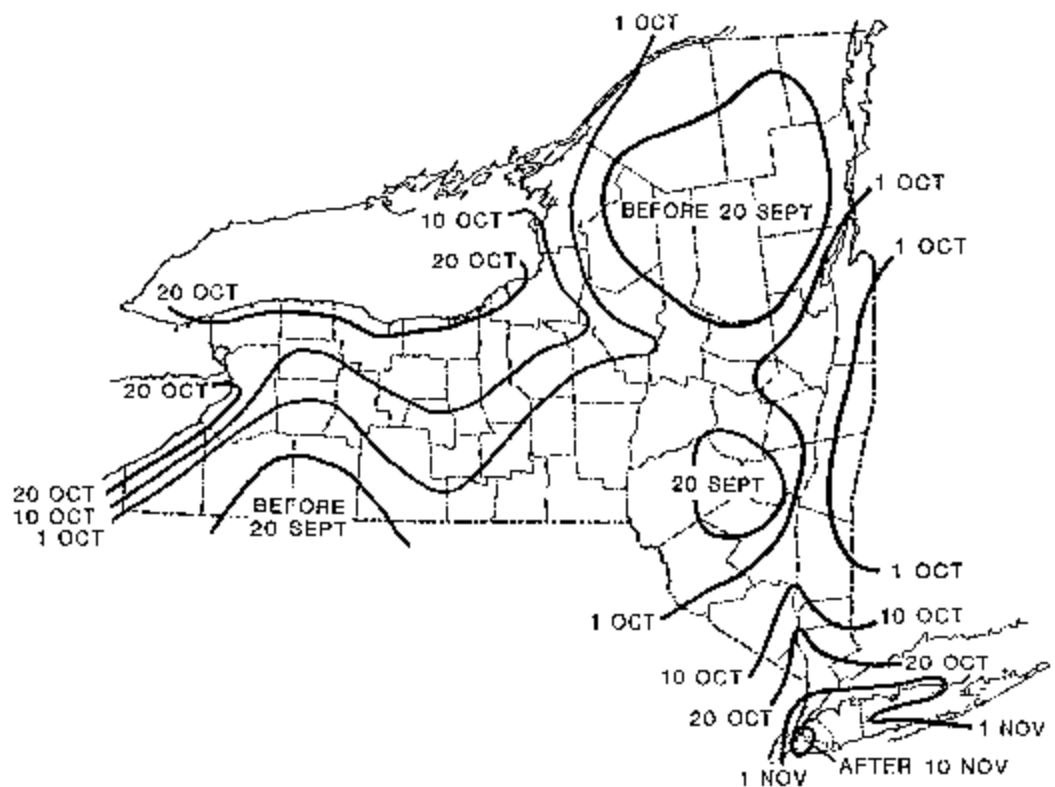


Table 95. TEMPERATURE: Departures From Normal by Months at Selected Stations, 1999

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>Degrees F.</i>											
Albany	1.2	4.7	0.1	0.2	1.8	2.8	2.4	-0.4	3.5	-1.4	4.4	4.5
Batavia	-0.4	6.7	-2.9	1.0	3.4	3.7	4.0	<u>1/</u>	2.3	0.1	5.2	3.0
Binghamton	1.6	5.2	-2.3	0.6	3.1	2.0	2.5	-1.6	2.7	-1.8	2.4	3.1
Bridgehamton	2.6	3.1	1.3	1.8	1.2	3.0	3.5	0.0	2.0	-0.7	2.2	2.3
Buffalo	-0.1	6.5	-2.8	0.8	3.1	2.5	3.2	-1.1	2.4	-1.0	3.4	2.9
Canton	-0.4	7.5	-2.3	1.0	4.0	4.6	2.8	-1.5	4.5	-2.0	6.6	4.8
Chazy	1.4	7.0	2.5	1.2	4.5	5.3	3.4	0.5	5.6	-1.3	5.3	5.5
Coopertown	0.6	5.6	-2.4	0.8	2.2	2.8	<u>1/</u>	<u>1/</u>	1.8	-1.8	3.9	3.2
Dansville	-0.3	5.1	-4.0	-0.1	3.4	3.0	3.3	-1.3	2.2	-1.0	3.8	1.6
Elmira	0.2	4.5	-2.4	0.2	2.3	2.8	3.2	-0.1	2.9	-1.4	3.3	1.5
Fredonia	1.2	7.4	-2.2	2.2	3.8	3.5	4.5	-0.1	3.1	0.8	4.9	3.8
Geneva	0.1	5.6	-2.6	0.4	3.1	3.4	3.0	-1.2	2.7	-1.2	3.9	2.4
Glens Falls	1.3	3.8	-0.2	-0.2	2.0	2.4	1.9	-0.4	4.2	-1.3	5.4	5.4
Gloversville	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	3.3	2.0	-0.9	4.1	-2.8	4.1	4.2
Ithaca	1.2	5.5	-3.6	-0.4	<u>1/</u>	<u>1/</u>	3.6	-0.4	3.0	-1.6	4.5	<u>1/</u>
Liberty	1.2	4.3	-0.7	0.4	0.5	<u>1/</u>	<u>1/</u>	<u>1/</u>	2.4	-2.2	3.3	3.6
Little Valley	0.3	4.6	-4.7	1.0	3.2	1.8	2.7	-2.5	0.8	-2.3	4.0	1.0
Lowville	0.4	5.9	-3.1	0.0	2.9	3.6	2.6	-0.4	4.0	-2.2	5.6	2.3
Massena	-0.6	6.0	-1.1	0.8	4.1	2.7	1.8	-1.7	3.6	-2.1	6.1	4.8
New York City	2.4	5.3	0.1	1.0	0.4	1.6	4.6	0.0	1.0	-1.5	3.2	3.4
Riverhead	4.2	5.5	1.8	2.6	2.5	4.1	5.6	2.2	3.3	1.1	4.7	4.0
Rochester	-0.7	6.0	-3.5	-0.6	2.5	3.2	4.1	-0.9	2.3	-0.2	4.4	3.1
Syracuse	0.1	5.6	-2.4	0.8	3.6	4.5	4.6	0.5	3.3	-1.2	3.8	2.6
Utica	1.7	7.3	<u>1/</u>	1.8	4.5	4.6	3.9	0.0	4.8	0.1	5.7	4.7
Watertown	-0.1	7.1	-3.2	0.2	3.5	4.3	2.4	-1.4	3.5	-1.6	5.5	4.0

Table 96. PRECIPITATION: Departures From Normal by Months at Selected Stations, 1999

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>Inches</i>											
Albany	2.42	-0.68	1.22	-2.39	-0.60	-1.54	-0.94	-0.02	8.11	-0.41	-1.16	-1.51
Batavia	<u>1/</u>	-0.86	1.78	-0.57	0.40	-1.60	-0.32	<u>1/</u>	-0.55	0.04	<u>1/</u>	<u>1/</u>
Binghamton	2.35	-0.78	-0.25	-0.60	-1.83	-0.32	-1.23	-1.96	3.66	-1.74	-0.36	-1.35
Bridgehamton	1.79	-0.10	0.14	-1.47	-0.76	-2.98	0.24	-0.86	4.12	1.02	-2.26	-0.63
Buffalo	3.08	-1.21	-0.25	-0.66	-0.32	-1.62	-2.08	0.21	0.46	-0.14	-0.50	-1.47
Canton	<u>1/</u>	-1.27	1.62	-2.52	-0.39	-0.44	0.96	-2.43	2.53	0.65	-0.72	-0.90
Chazy	<u>1/</u>	<u>1/</u>	<u>1/</u>	-2.03	-1.30	-0.44	1.76	-3.12	2.72	<u>1/</u>	<u>1/</u>	<u>1/</u>
Coopertown	1.54	-1.03	1.29	-1.12	-1.19	-2.12	<u>1/</u>	<u>1/</u>	3.68	-1.51	-0.34	-1.98
Dansville	1.76	<u>1/</u>	0.90	-0.81	-1.23	-1.09	0.26	0.19	0.17	-0.23	-0.49	<u>1/</u>
Elmira	<u>1/</u>	<u>1/</u>	3.04	-0.25	-2.04	-1.68	-1.21	-1.34	3.43	-1.79	-0.16	<u>1/</u>
Fredonia	2.29	-1.25	<u>1/</u>	0.64	0.24	-0.42	-2.46	-1.02	-0.67	-0.76	0.19	0.19
Geneva	<u>1/</u>	-1.45	0.84	-0.50	-1.83	-1.12	0.44	-0.52	1.60	0.24	-0.57	-0.83
Glens Falls	4.89	-1.05	-1.08	-2.40	-1.39	-1.79	0.26	-1.17	4.42	-0.59	-0.86	-1.93
Gloversville	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	<u>1/</u>	-2.43	0.34	0.10	2.28	-1.61	-1.72	-2.22
Ithaca	1.33	-1.13	1.67	-0.69	<u>1/</u>	<u>1/</u>	-2.21	-0.57	3.38	-1.55	-0.31	<u>1/</u>
Liberty	<u>1/</u>	-1.58	0.23	-2.53	-0.78	<u>1/</u>	<u>1/</u>	<u>1/</u>	4.03	0.35	-2.44	-1.99
Little Valley	2.55	<u>1/</u>	-0.65	<u>1/</u>	-0.35	-2.08	-1.82	-1.45	-1.76	-0.70	2.63	<u>1/</u>
Lowville	3.74	-1.75	1.70	-2.11	-0.58	-1.95	0.68	-3.18	2.19	-0.19	0.67	-1.43
Massena	2.98	-1.25	1.28	-2.22	-0.81	-0.15	0.99	-2.65	2.89	-0.25	-1.02	-0.97
New York City	3.60	0.22	-0.07	-2.27	-0.38	-3.48	-3.91	-1.12	4.92	-0.83	-2.14	-0.68
Riverhead	3.62	0.34	1.56	-2.22	-0.28	-2.87	0.32	4.36	2.12	0.28	<u>1/</u>	-1.58
Rochester	1.84	-1.41	1.01	-0.54	0.00	-0.48	-0.93	2.31	0.44	-0.32	-0.06	-0.67
Syracuse	2.99	-0.72	0.76	-1.58	-2.47	-2.01	-1.26	-2.49	1.56	-0.47	-0.56	-1.80
Utica	1.83	-1.76	<u>1/</u>	-1.70	-1.30	-1.69	1.61	-2.02	2.82	0.11	-1.80	-2.50
Watertown	4.92	-0.92	3.51	-1.56	-1.17	0.83	2.79	-1.78	2.23	0.93	0.34	-0.68

1/ Data not available.

Weather information and data furnished in cooperation by National Weather Service, NOAA, U.S. Dept. of Commerce.

Table 97. TEMPERATURE: Monthly Average Temperatures at Selected Stations, 1999

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>Degrees F.</i>											
Albany	21.8	28.2	34.4	46.6	59.4	69.7	74.2	69.2	64.8	48.8	44.1	31.0
Batavia	23.0	31.3	31.7	47.1	60.9	70.2	74.8	1/	64.4	51.7	45.9	31.6
Binghamton	22.7	27.9	30.3	45.0	58.9	66.2	71.7	65.6	62.3	47.0	40.7	29.6
Bridgehamton	32.5	24.2	39.5	48.4	57.4	68.5	75.0	71.0	66.1	53.3	47.2	37.5
Buffalo	23.5	31.0	31.0	46.0	59.7	68.4	74.3	67.9	64.3	50.1	43.9	32.0
Canton	14.4	24.0	26.3	43.1	58.3	67.8	71.1	64.5	62.6	44.9	42.6	25.7
Chazy	17.5	25.1	32.0	44.3	59.9	69.7	72.5	67.1	63.9	46.2	41.5	27.7
Coopertown	21.0	27.8	29.9	44.3	57.1	66.0	1/	1/	60.7	46.6	41.9	29.0
Dansville	23.5	30.0	30.4	45.3	59.9	68.5	73.6	67.2	63.6	49.8	44.7	31.1
Elmira	23.0	28.5	31.6	45.3	58.2	67.5	72.9	67.6	63.2	47.6	42.9	29.9
Fredonia	26.1	7.4	33.1	48.3	61.0	69.9	75.4	69.1	66.3	53.7	47.3	34.7
Geneva	22.4	5.6	30.6	45.3	59.2	68.6	73.4	67.4	64.0	49.0	43.9	30.4
Glens Falls	18.3	3.8	31.7	44.4	57.8	67.1	71.7	67.0	63.2	46.4	42.6	29.3
Gloversville	1/	1/	1/	1/	1/	67.8	71.1	66.1	62.9	45.2	40.7	28.3
Ithaca	22.7	5.5	29.3	43.6	1/	1/	72.2	66.5	62.8	47.4	43.7	30.3
Liberty	21.6	4.3	31.5	44.1	55.0	1/	1/	1/	60.8	45.6	41.0	29.3
Little Valley	21.0	4.6	26.5	43.5	56.4	63.9	69.3	62.6	59.2	45.6	41.9	27.7
Lowville	16.0	5.9	25.7	41.9	56.8	66.5	70.1	64.9	61.3	44.5	41.0	24.5
Massena	13.7	6.0	27.2	43.5	59.3	66.6	71.0	64.8	61.6	44.9	41.4	25.0
New York City	33.9	5.3	42.5	53.5	63.1	73.2	81.4	75.5	69.2	56.0	50.8	40.0
Riverhead	34.6	5.5	41.4	51.3	61.8	72.5	79.1	74.8	69.2	56.7	50.6	39.7
Rochester	22.9	6.0	30.8	45.3	59.6	68.3	74.3	67.1	64.0	50.9	44.9	32.2
Syracuse	22.5	5.6	31.5	46.5	60.7	69.8	75.0	68.9	64.8	49.5	44.3	30.9
Utica	21.8	7.3	1/	46.5	60.8	69.5	74.1	68.2	65.1	49.2	44.3	30.5
Watertown	17.8	7.1	27.7	43.4	57.7	67.1	71.0	65.4	62.7	46.8	43.4	28.1

Table 98. PRECIPITATION: Monthly Precipitation at Selected Stations, 1999

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>Inches</i>											
Albany	4.78	1.59	4.15	0.60	2.77	2.08	2.24	3.45	11.0	2.42	2.07	1.42
Batavia	7.74	0.97	3.80	2.50	3.71	2.16	2.65	5.10	3.10	3.00	3.79	0.41
Binghamton	4.75	1.55	2.57	2.53	1.53	3.28	2.27	1.40	6.98	1.15	2.92	1.65
Bridgehamton	5.97	3.75	4.25	2.50	3.06	0.61	3.24	2.59	7.58	4.41	2.27	3.68
Buffalo	5.78	1.10	2.43	2.21	2.82	1.93	1.00	4.38	3.95	2.95	3.33	2.20
Canton	4.96	0.60	3.73	0.33	2.59	2.84	4.33	1.75	6.38	3.90	2.71	1.86
Chazy	0.14	0.24	1.35	0.54	1.66	2.60	5.14	0.96	5.81	3.60	1.57	0.84
Coopertown	3.97	1.14	4.33	2.17	2.46	2.06	1/	1/	7.40	1.54	2.37	1.11
Dansville	3.16	0.63	2.69	2.00	1.68	2.72	3.29	3.41	3.53	2.39	2.17	1.34
Elmira	3.09	1.02	5.36	2.44	1.16	2.08	2.16	1.71	6.51	1.01	2.79	2.54
Fredonia	4.55	0.83	1.33	3.80	3.37	3.24	1.14	2.95	3.98	3.15	4.44	3.59
Geneva	4.10	0.33	2.90	2.41	1.17	2.55	3.39	2.62	4.82	3.14	2.49	1.64
Glens Falls	7.49	1.22	1.81	0.58	2.21	1.39	3.22	2.48	7.51	2.30	2.22	1.04
Gloversville	1/	1/	1/	1/	1/	1.60	4.05	4.03	6.05	1.73	2.04	1.33
Ithaca	3.15	0.87	3.94	2.22	1/	1/	1.24	2.87	6.91	1.70	2.77	1.25
Liberty	6.35	1.68	3.75	1.83	3.85	1/	1/	1/	7.94	4.07	1.83	1.98
Little Valley	5.95	1.34	2.81	3.57	2.54	2.47	2.21	3.02	2.92	3.37	7.46	3.29
Lowville	6.79	0.75	4.48	0.99	2.47	1.57	4.01	0.62	5.96	3.23	4.74	2.26
Massena	5.11	0.74	3.43	0.43	1.72	2.99	4.16	1.09	6.38	2.56	2.11	2.22
New York City	7.02	3.49	4.01	1.93	4.04	0.19	0.44	2.89	8.81	2.73	2.33	3.23
Riverhead	7.58	3.91	5.47	1.84	3.51	0.80	3.67	8.18	5.31	3.79	1.96	2.56
Rochester	3.92	0.69	3.29	2.07	2.72	2.52	1.78	5.71	3.41	2.12	2.86	2.06
Syracuse	5.33	1.43	3.53	1.75	0.81	1.78	2.55	1.02	5.35	2.77	3.16	1.40
Utica	4.88	1.26	1/	1.86	2.37	2.41	5.42	1.78	7.15	3.48	2.92	1.74
Watertown	7.45	1.10	5.72	0.95	1.52	3.52	4.73	1.50	5.49	3.69	3.65	2.16

1/ Data not available.

Weather information and data furnished in cooperation by National Weather Service, NOAA, U.S. Dept. of Commerce.

Table 99. TEMPERATURE: Average Monthly Soil Temperatures at
Selected Stations, January-December 1999

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
<u>Degrees F.</u>												
<u>HUDSON VALLEY</u>												
<u>Valatie</u>												
4" Max.	30.4	29.5	30.8	46.7	60.5	75.5	80.2	76.7	69.2	54.2	46.1	35.0
4" Min.	30.1	29.0	30.1	42.2	55.8	67.6	72.9	69.5	63.3	49.7	42.6	33.4
8" Max.	32.3	31.6	32.1	48.5	62.3	75.5	79.4	76.1	68.8	55.2	47.5	37.2
8" Min.	32.3	31.6	31.6	44.5	58.1	70.3	75.3	72.5	66.3	53.2	45.2	36.1
<u>ST. LAWRENCE VALLEY</u>												
<u>Canton</u>												
4" Max.	32.5	32.4	32.4	47.2	62.2	74.5	78.7	73.5	69.3	53.6	46.5	32.5
4" Min.	31.9	31.3	31.5	39.5	53.5	64.5	69.1	65.1	61.4	48.8	42.3	30.8
8" Max.	32.3	32.0	32.0	43.8	57.4	68.7	73.1	69.6	65.6	51.9	45.5	42.7
8" Min.	31.9	32.0	32.0	39.8	53.2	64.4	69.0	65.6	61.7	49.5	43.0	41.2
<u>CENTRAL LAKES</u>												
<u>Ithaca</u>												
4" Max.	28.2	30.3	31.2	43.4	53.6	<u>1/</u>	69.1	73.7	69.7	58.3	51.9	37.2
4" Min.	27.8	29.5	29.4	38.5	48.6	<u>1/</u>	63.5	70.7	67.2	56.3	49.6	35.2
8" Max.	35.7	37.0	37.6	48.8	59.0	<u>1/</u>	76.0	65.5	60.7	48.4	41.8	36.9
8" Min.	35.5	36.5	36.6	46.3	56.3	<u>1/</u>	72.8	60.5	56.4	45.4	38.9	35.7

1/ Data not available.

Weather information and data furnished in cooperation by National Weather Service, NOAA, U.S. Dept. of Commerce.

Table 100. HEATING DEGREE DAYS: Selected Stations, January-December, 1999 ^{1/}

Station	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	<i>Degrees F.</i>											
Albany	1,335	1,021	940	542	180	22	2	14	93	493	621	1,048
Batavia	1,301	940	1,042	528	168	42	3	2/	95	404	567	1,029
Binghamton	1,304	1,033	1,069	592	195	67	11	48	146	551	724	1,090
Bridgehamton	1,002	856	784	491	234	32	4	5	43	362	526	843
Buffalo	1,280	949	1,048	566	193	58	0	17	97	454	628	1,014
Canton	1,562	1,141	1,191	649	239	60	18	88	145	615	668	1,209
Chazy	1,468	1,114	1,012	615	181	25	5	39	117	580	698	1,148
Coopertown	1,355	1,038	1,081	614	240	58	2/	2/	162	565	687	1,113
Dansville	1,279	973	1,065	585	188	56	8	32	110	465	603	1,044
Elmira	1,298	1,018	1,031	584	209	65	10	38	124	533	656	1,083
Fredonia	1,197	890	983	496	164	45	2	12	67	342	524	935
Geneva	1,317	1,002	1,058	584	196	55	8	25	104	487	627	1,067
Glens Falls	1,441	1,146	1,024	610	225	41	9	29	123	571	665	1,099
Gloversville	2/	2/	2/	2/	2/	43	12	37	125	607	721	1,133
Ithaca	1,302	1,024	1,102	633	2/	2/	11	52	130	542	634	1,072
Liberty	1,339	1,063	1,032	617	302	2/	2/	2/	160	596	714	1,098
Little Valley	1,360	1,091	1,188	631	282	98	31	95	196	596	679	1,139
Lowville	1,514	1,161	1,211	684	259	66	17	66	175	628	713	1,251
Massena	1,608	1,188	1,160	638	200	62	9	60	155	617	699	1,239
New York City	955	725	687	340	98	4	0	3	24	271	418	769
Riverhead	936	774	725	404	124	1	0	0	9	252	425	779
Rochester	1,295	955	1,054	583	194	57	2	25	100	431	595	1,008
Syracuse	1,310	986	1,032	545	161	41	0	14	96	473	613	1,049
Utica	1,335	997	1,144	546	154	40	1	20	96	484	612	1,064
Watertown	1,456	1,077	1,150	642	238	59	6	55	141	555	640	1,135

^{1/} One heating degree day is accumulated for each whole degree that the daily mean temperature is below 65 degrees Fahrenheit.

2/ Data not available.

Weather information and data furnished in cooperation by National Weather Service, NOAA, U.S. Dept. of Commerce.

Table 101. POPULATION: Resident Population, July 1, New York and United States, 1989-1999

Year	New York	United States
	<i>Thousands</i>	
1989	17,950	248,239
1990	18,003	249,398
1991	18,037	252,106
1992	18,099	255,011
1993	18,170	257,795
1994	18,197	260,372
1995	18,191	262,890
1996	18,185	265,284
1997	18,137	267,636
1998	18,159	270,248
1999	18,197	272,691

SOURCE: Bureau of Census, U.S. Department of Commerce.